Amendments to the claims

1. (Currently amended) A monitoring device for detecting overheated pneumatic tires; the monitoring device comprising:

a body capable of being positioned adjacent a pneumatic tire having that is at least partially fabricated from a tire material; and

a sensor carried by the body; the sensor being configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated before the tire material combusts.

2. (Original) The monitoring device of claim 1, wherein the body defines an opening with the sensor being in fluid communication with the opening.

3. (Original) The monitoring device of claim 1, wherein the body has an outer surface and the sensor is disposed at the outer surface of the body.

4. (Original) The monitoring device of claim 1, wherein the sensor is carried by a body adapted to be hand-held and moved adjacent pneumatic tires by a user.

5. (Original) The monitoring device of claim 1, wherein the body carrying the sensor is adapted to be hand-held and moved adjacent pneumatic tires by a user.

6. (Canceled)

7. (Original) The monitoring device of claim 1, wherein the body carrying the sensor is adapted to be an on-board reader.

8. (Original) The monitoring device of claim 1, wherein the pneumatic tire has an inner chamber; the sensor being exposed to the inner chamber of the pneumatic tire.

9. (Original) The monitoring device of claim 1, wherein the sensor is one of a LED-type, a catalytic-type, an electrochemical-type, and Metallic Oxide Semiconductor-type sensor.

10. (Original) In combination, a pneumatic tire having a chamber adapted to be pressurized and a monitoring device;

the pneumatic tire being fabricated from a tire material;

the monitoring device having a sensor exposed to the chamber of the pneumatic tire; and

the sensor being configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated.

11. (Original) The combination of claim 10, further comprising a rim; the pneumatic tire being mounted on the rim; the monitoring device being carried by the rim.

12. (Currently amended) In combination, a vehicle and a monitoring device;

the vehicle having a plurality of pneumatic tires;

each of the pneumatic tires being fabricated from a tire material;

the monitoring device being carried by the vehicle adjacent at least one of the tires; and

the monitoring device having a sensor configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated before the tire material combusts.

13. (Original) The combination of claim 12, further comprising a monitoring device carried by the vehicle adjacent each of the tires.

14. (Original) In combination, a vehicle gate and a monitoring device;

the vehicle gate adapted to allow a target vehicle to drive through the gate; the target vehicle having a plurality of pneumatic tires;

each of the pneumatic tires being fabricated from a tire material;

the monitoring device having a sensor being carried by the vehicle gate at a sensor position; the sensor position adapted to cause at least a portion of the pneumatic tires of the target vehicle to pass adjacent the sensor when the target vehicle passes through the vehicle gate; and

the sensor configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated.

15. (Currently amended) A method for detecting an overheated tire fabricated from a tire material; the method comprising the steps of:

providing a sensor configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated;

sensing the air adjacent the tire with the sensor; ~~and~~

~~creating an indication signal when the sensor detects a condition of airborne molecules that meets a predetermined criteria~~

sensing the concentration of airborne molecules generated when the tire material of the pneumatic tire is overheated; the airborne molecules being sensed being different than the molecules created during the combustion of tire material; and

creating an indication signal when the sensor detects a concentration of airborne molecules that meets a predetermined limit.

16. (Cancelled)

17. (New) The monitoring device of claim 14, wherein the sensor is one of a LED-type, a catalytic-type, an electrochemical-type, and Metallic Oxide Semiconductor-type sensor.

18. (New) The monitoring device of claim 14, wherein the target vehicle has a right side and a left side with tires disposed at both sides of the vehicle; the vehicle gate having sensors carried by the vehicle gate sensor positions; the sensor positions adapted to cause at least the tires disposed at the right and left sides of the vehicle to pass adjacent the sensor when the target vehicle passes through the vehicle gate.

19. (New) In combination, a vehicle gate and a monitoring device;

the vehicle gate adapted to allow a target vehicle to drive adjacent the gate; the target vehicle having a plurality of pneumatic tires;

each of the pneumatic tires being fabricated from tire material;

the monitoring device having a sensor carried by the vehicle gate at a sensor position; the sensor position adapted to cause at least a portion of the pneumatic tires of the target vehicle to pass adjacent the sensor when the target vehicle passes adjacent the vehicle gate; and

the sensor configured to detect airborne molecules generated when the tire material of the pneumatic tire is overheated.

20. (New) The monitoring device of claim 19, wherein the sensor is one of a LED-type, a catalytic-type, an electrochemical-type, and Metallic Oxide Semiconductor-type sensor.

21. (New) The monitoring device of claim 19, wherein the target vehicle has a right side and a left side with tires disposed at both sides of the vehicle; the vehicle gate having sensors carried by the vehicle gate sensor positions; the sensor positions adapted to cause at least the tires disposed at the right and left sides of the vehicle to pass adjacent the sensor when the target vehicle passes adjacent the vehicle gate.